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# Effects of Goal Orientation and Perceived Value of Toughness on Antisocial Behavior in Soccer: The Mediating Role of Moral Disengagement

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In this study, we examined (a) the effects of goal orientations and perceived value of toughness on antisocial behavior toward opponents and teammates in soccer and (b) whether any effects were mediated by moral disengagement. Male soccer players ( $N = 307$ ) completed questionnaires assessing the aforementioned variables. Structural equation modeling indicated that ego orientation had positive and task orientation had negative direct effects on antisocial behavior toward opponents. Further, ego orientation and perceived value of toughness had indirect positive effects on antisocial behavior toward opponents and teammates which were mediated by moral disengagement. Collectively, these findings aid our understanding of the effects of personal influences on antisocial behavior and of psychosocial mechanisms that could facilitate such antisocial conduct in male soccer players.

**Keywords:** goal orientation, mediation, toughness, structural equation modeling

The occurrence of antisocial behaviors in sport has been reported in several studies. For example, behaviors such as trying to injure opponents and intentionally breaking the rules of the game (e.g., Kavussanu, Seal, & Phillips, 2006), cheating and arguing with officials (Shields, Bredemeier, LaVoi, & Power, 2005), making fun of a teammate who is less skilled (Shields, LaVoi, Bredemeier, & Power, 2007), and faking an injury to fool an official (Long, Pantaléon, Bruant, & d'Arripe-Longueville, 2006) have been documented. Although different labels have been used by different researchers to refer to these behaviors, a defining characteristic is that they can have negative consequences for others. The broad term *antisocial behavior* has been used to refer to voluntary acts intended to harm or disadvantage another individual (Kavussanu et al., 2006; Sage, Kavussanu, & Duda, 2006) and includes the behaviors mentioned above. An important goal

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for sport-morality researchers is to understand what leads players to engage in antisocial acts while playing sport.

Most research that has investigated antisocial sport behaviors has focused solely on behaviors directed at *opponents* (e.g., Kavussanu et al., 2006; Sage & Kavussanu, 2007; Sage et al., 2006). However, recent work has shown that antisocial sport acts can also be directed toward teammates (Kavussanu & Boardley, 2009). Examples of these behaviors are verbally abusing or criticizing a teammate. This distinction between behaviors directed toward opponents and teammates is an important one because most athletes have teammates. Thus, investigating antisocial behaviors directed toward teammates can aid our understanding of the social conduct that takes place in sport. The present study examined predictors of antisocial behaviors toward opponents and teammates in soccer.

One construct that may predict antisocial sport behaviors is moral disengagement (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996), which refers to eight psychosocial mechanisms that individuals use to minimize negative emotional reactions (e.g., guilt, shame) when engaging in transgressive conduct. These mechanisms act by cognitively reconstruing the harmful behaviors into benign ones, minimizing personal accountability for transgressive acts, misrepresenting the injurious effects that result from harmful conduct, or blaming the character or actions of the victim (Bandura, 1991). The eight mechanisms are euphemistic labeling, moral justification, advantageous comparison, diffusion of responsibility, displacement of responsibility, distortion of consequences, dehumanization, and attribution of blame. A full description can be found in Bandura (1991), and sport-specific examples of each mechanism have been provided by Boardley and Kavussanu (2007).

To illustrate the use of moral disengagement in the sport context, we provide definitions and examples of two commonly used mechanisms in sport: moral justification and displacement of responsibility. The use of these two mechanisms (among others) has been identified in both qualitative (Long et al., 2006) and quantitative (Boardley & Kavussanu, 2007) research in sport. Moral justification occurs when detrimental conduct is made personally and socially acceptable by portraying it in the service of a valued social or moral purpose (Bandura, 1991); an example in sport is a player saying that he or she deliberately injured an opponent to protect a teammate. Displacement of responsibility occurs when people view their actions as arising from social pressures or the directives of others rather than as something for which they are personally responsible (Bandura, 1991); an example in sport is a player thinking that he/she is not responsible for injuring an opponent because he/she was told to do it by his/her coach.

Moral disengagement has been investigated in numerous contexts. In the first empirical study to investigate this construct, moral disengagement was positively associated with aggressive behaviors such as fighting, hurting, and verbally disparaging other children, and delinquent behaviors such as theft, cheating, lying, destructiveness, truancy, and use of alcohol and drugs in Italian school children (Bandura et al, 1996). Other studies have established positive links between moral disengagement and transgressive acts in society (Bandura, Caprara, Barbaranelli, Pastorelli, & Regalia, 2001), and bullying and perceived importance of social status in prisons (South & Wood, 2006).

Researchers have recently started to examine moral disengagement in sport. For example, Long and colleagues interviewed young elite athletes and found that

when describing their transgressions in sport, athletes often used moral disengagement to justify and minimize personal accountability for their actions (Long et al., 2006). Boardley and Kavussanu (2007) showed that moral disengagement was used by team sport athletes and was positively related to their reported frequency of antisocial behaviors toward opponents. These findings were replicated in a second sample of netball and hockey players, in which moral disengagement was also positively associated with antisocial behavior toward teammates (Boardley & Kavussanu, 2009). Finally, moral disengagement has been positively linked to the self-reported use of illicit doping substances in physically active adolescents (Lucidi, Zelli, Mallia, Grano, Russo, & Violani, 2008). Thus, moral disengagement clearly takes place in sport and has the potential to explain antisocial sport behaviors.

Two other variables that are relevant for antisocial behavior in sport are ego and task goal orientations (Nicholls, 1989). Ego orientation refers to the tendency to define success and evaluate competence using other-referenced criteria; thus, the highly ego-oriented person tends to feel successful when he or she has outperformed others. Task orientation is the tendency to define success and evaluate competence using self-referenced criteria; thus, the task-oriented individual feels successful when he or she has mastered a task, learned something new, or improved a skill (Nicholls, 1989). It has been suggested that individuals high in ego orientation are less likely to be concerned about justice and fairness because of their focus on winning (Nicholls, 1989), whereas athletes high in task orientation are more likely to play by the rules and desire a fair competition due to the importance they place on self-referenced competence (Duda, Olson, & Templin, 1991). Engaging in rule-breaking acts may make evaluations of self-referenced competence ambiguous, as it would be unclear whether high performance was the result of skill or transgressive behavior.

Several studies have investigated the relationships between ego and task orientation and morally relevant cognitions and behaviors in sport (see Kavussanu, 2008). Ego orientation has been positively associated with attitudes toward unsportsmanlike play, lower levels of moral functioning, and antisocial judgment and behavior (Duda et al., 1991; Kavussanu, 2006; Kavussanu & Roberts, 2001; Sage & Kavussanu, 2007, 2008; Sage et al., 2006). In contrast, task orientation has emerged as a negative predictor of antisocial behavior (Kavussanu, 2006; Sage & Kavussanu, 2007) and has been negatively linked to unsportsmanlike attitudes (Duda et al., 1991; Stuntz & Weiss, 2003). However, links between task orientation and morality in sport have not been as consistent as those for ego orientation. More specifically, null relationships have been reported between task orientation and aggressive tendencies, likelihood to aggress against an opponent, and judgments about the legitimacy of injurious acts (e.g., Kavussanu & Roberts, 2001; Stephens, 2001; Stephens & Bredemeier, 1996).

Although the link between goal orientations—particularly ego—and morally relevant behavior in sport is well established, research has focused almost exclusively on behaviors directed toward opponents. However, the two achievement goals may also have implications for behaviors toward teammates. First, due to their concern with establishing superiority over others, ego-oriented athletes may criticize their teammates' performance to look better in comparison with them. In addition, athletes high in task orientation are more likely to believe that cooperating with their peers leads to success in sport. Indeed, positive relationships have been

identified between task orientation as well as cooperation (Duda & Nicholls, 1992) and positive friendship quality (Smith, Balaguer, & Duda, 2006). Cooperating with peers and perceiving positive peer relationships are incompatible with antisocial behaviors such as verbally abusing and swearing at teammates, and consequently, athletes high in task orientation may be less inclined to behave antisocially toward their teammates. Thus, ego orientation may correspond to high levels, and task orientation to low levels of antisocial behavior toward teammates.

Another variable that may have implications for antisocial behavior in sport is the perceived value of toughness. Perceived importance of social status—referred to in the current study as *perceived value of toughness*—within the prison environment has been defined as the importance prisoners attach to dominating others to gain acceptance and status (South & Wood, 2006). The investigation of this construct may also be important in sport, especially in sports where being perceived as tough is held in high regard. Soccer is one sport in which it has been suggested that players value those who are perceived to be tough (Sage & Kavussanu, 2007). Soccer players who perceive that their teammates respect those who are seen as being tough may engage in antisocial conduct more frequently to appear tough and gain acceptance and status within their team.

Although to date the relationship between perceived value of toughness and antisocial behavior in sport has not been investigated, support for a link between these two variables exists. Specifically, South and Wood (2006) investigated the relationship between perceived importance of social status and reported bullying in prisoners. Some examples of the bullying behaviors assessed are threatening other prisoners with violence and hitting or kicking another prisoner. This research identified a moderate positive relationship between perceived importance of social status and bullying. Research is needed to investigate whether a similar link exists between perceived value of toughness and frequency of antisocial behaviors in sport.

When relationships between independent and dependent variables are discovered, it is important to identify the mediating variables that transmit these effects (MacKinnon, Fairchild, & Fritz, 2007). Thus, if athletes who report high ego orientation and value toughness engage in antisocial behavior frequently, it is important to try to understand the process through which this occurs. Although previous literature has linked ego orientation with frequent antisocial conduct (e.g., Kavussanu, 2006; Sage et al., 2006), no study has investigated what variables mediate this relationship. Moral disengagement could be one such variable. Transgressive conduct is normally regulated by negative self-reactions (e.g., guilt) that reduce motivation for such acts (Bandura, 1991). However, the use of moral disengagement can allow people to violate their moral standards without self-condemnation by preventing negative self-reactions. Over time, ego-oriented athletes or athletes who value toughness may learn to morally disengage in order to minimize negative emotions when acting antisocially (see Bandura, 1991). Thus, moral disengagement may mediate the effects of ego orientation and perceived value of toughness on antisocial sport behavior.

Previous research suggests that males compared with females, and soccer players compared with athletes from other sports, typically display lower levels of morality. Specifically, moral disengagement is higher in male than female athletes and in soccer than in basketball, hockey, and netball players (Boardley & Kavussanu, 2007). In addition, males have been found to be higher than females in aggressive tendencies (Bredemeier, 1994), unsportsmanlike attitudes (Duda et al.,

1991), and perceived legitimacy of injurious acts (Duda et al., 1991; Kavussanu & Roberts, 2001). Thus, because males and soccer players have previously displayed comparatively low levels of morality, male soccer players are of particular interest to researchers investigating antisocial behavior in sport.

The purpose of the current study was to investigate the effects of goal orientations and perceived value of toughness on antisocial behavior toward opponents and teammates in male soccer players and to determine whether any effects were mediated by moral disengagement. We hypothesized that moral disengagement would at least partially mediate the positive effects of ego orientation and perceived value of toughness on antisocial behavior, and that task orientation would have direct negative effects on antisocial behavior (Sage & Kavussanu, 2007; South & Wood, 2006). The prediction was the same for antisocial behavior toward opponents and teammates. Consistent with past research in soccer players, we hypothesized that task would be positively related with ego orientation (Sage & Kavussanu, 2007) and, based on research involving the two types of antisocial behavior in netball and hockey players (Boardley & Kavussanu, 2009), we expected that the two antisocial behaviors would be positively related. Further, because ego orientation has been linked to antisocial behavior (Kavussanu, 2008), and perceived importance of social status has been associated with bullying (South & Wood, 2006), and therefore have similar correlates, an association between ego orientation and perceived value of toughness was hypothesized. The hypothesized model is presented in Figure 1.

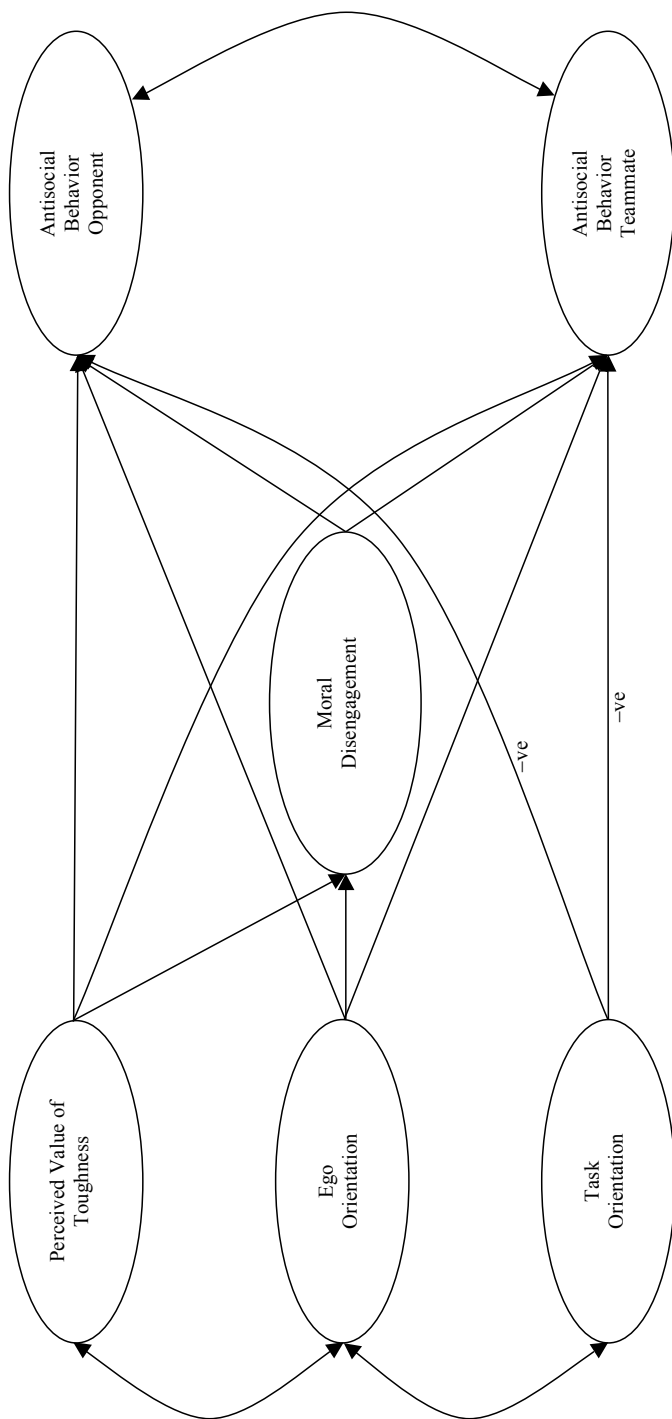
## Method

### Participants

Participants were 307 male soccer players whose age ranged from 16 to 36 years ( $M = 21.39$ ,  $SD = 4.01$ ). At the time of data collection, they had played soccer competitively for an average of 13.04 ( $SD = 5.14$ ) years, played for their current team for an average of 2.58 ( $SD = 1.97$ ) years, and played an average of 10.62 ( $SD = 5.37$ ) matches for their team in the current season. Players were predominantly playing at a club level (95.8%), although county (2.6%), regional (1.3%), and international (0.3%) levels were also represented.

### Measures

**Antisocial Behavior in Sport.** Two subscales from the Prosocial and Antisocial Behavior in Sport Scale (PABSS; Kavussanu & Boardley, 2009) were used to assess reported antisocial sport behavior toward teammates (five items) and opponents (eight items); behaviors toward teammates are all verbal in nature, whereas behaviors toward opponents are verbal or physical. Players were presented with the items describing antisocial behaviors and were asked to report how often they had engaged in each behavior this season on a scale anchored by 1 (*never*) and 5 (*very often*). Evidence for the content, factorial, concurrent, and discriminant validity of the PABSS has been provided (Kavussanu & Boardley, 2009), and the antisocial teammate and opponent behavior subscales have shown good-to-very-good levels of reliability ( $\alpha = .83$ , and  $\alpha = .86$ , respectively). The items used from this scale, as well as from all other scales, can be found in the Appendix.



**Figure 1** — Hypothesized structural model. *Note.* All hypothesized paths are positive unless otherwise stated.



**Moral Disengagement.** The Moral Disengagement in Sport Scale—Short (MDSS-S; Boardley & Kavussanu, 2008) was used to measure athletes' moral disengagement. This scale consists of eight items that assess moral disengagement in sport. Players were asked to read a number of statements describing thoughts and feelings that athletes may have and indicate their level of agreement with each statement using a Likert scale anchored by 1 (*strongly disagree*) and 7 (*strongly agree*). The scale has shown very good levels of internal consistency, with alpha coefficients ranging from .80 to .85, and evidence for its factorial, convergent, and concurrent validity has been reported (Boardley & Kavussanu, 2008).

**Perceived Value of Toughness.** A scale developed by South and Wood (2006) to measure perceived importance of social status was adapted for this study to measure perceived value of toughness. The original 11-item scale was developed for use with prisoners. Eight items were adapted (e.g., "If necessary I will use physical force to gain other prisoners' respect" was changed to "If necessary I will use physical force to gain my teammates' respect"), whereas the other three were deemed unsuitable for adaptation (e.g., prisoners with the most canteen are highly regarded) and removed. The adapted scale measured athletes' perceived value of appearing tough to their teammates. Athletes were asked to think about what is important to them when they play for their team and rate their level of agreement with the eight statements by responding on a Likert scale anchored by 1 (*strongly disagree*) and 5 (*strongly agree*). As this scale was adapted for use in this study, we tested its factorial validity using confirmatory factor analysis, which revealed some degree of model misfit,  $\chi^2(20) = 74.67$  ( $p < .05$ ); CFI = .930; RMSEA = .097; SRMR = .069. However, removal of the three items that contributed most to model misfit resulted in a considerable improvement in model fit,  $\chi^2(5) = 10.25$  ( $p > .05$ ); CFI = .987; RMSEA = .060; SRMR = .037. Thus, five items were used in all analyses as indicators of perceived value of toughness.

**Ego and Task Goal Orientations.** The Perception of Success Questionnaire (Roberts, Treasure, & Balague, 1998) was used to assess athletes' achievement goal orientations. This scale consists of two six-item subscales that measure ego and task orientations in sport. Athletes were asked to indicate when they feel most successful when playing soccer and responded on a Likert scale anchored by 1 (*strongly disagree*) and 5 (*strongly agree*). The scale has demonstrated very good levels of internal consistency, with an alpha coefficient of .88 for both subscales (Roberts et al., 1998).

## Procedure

After receiving clearance from the ethics committee of a British university, the head coaches of 25 teams in central England were contacted. All coaches agreed to allow their athletes to participate. Arrangements were made for data collection during designated training sessions, and trained research assistants visited teams to distribute the questionnaires. Before completing the questionnaire, all respondents were informed that the survey examined sporting attitudes, that honesty in responses was vital, and that all responses would be kept strictly confidential and used only for research purposes. Participants signed an informed consent form before completing the questionnaire, which took approximately 15 min to complete. Data were collected after 3 months of the season had passed.



## Results

### Missing Data and Data Screening

Only .72% of the data points were missing and only 13 of 307 cases had missing data. Missing data were deleted listwise. This procedure is recommended when (a) the total sample size is quite large, (b) only a small percentage of participants have missing data, and (c) there is nothing systematic about the cases that have missing data (Bentler & Wu, 2002). In this study, the sample size was quite large, only 4.2% of cases had missing data, and the patterns of missing data were nonsystematic as shown by the generalized least-squares tests of homogeneity of means and covariances in EQS (Kim & Bentler, 2002). Listwise deletion resulted in a usable sample of 294. Normality of the one continuous variable (i.e., moral disengagement) was shown by skewness (.11) and kurtosis (−.11) values of <|2|.

### Scale Reliabilities, Descriptive Statistics, and Factor Correlations

Scale reliabilities were estimated using the composite reliability coefficient (see Raykov, 1997), which is obtained using structural equation modeling (SEM). This coefficient was used in preference to the more commonly used Cronbach's alpha coefficient because the latter has been shown to be a lower bound to the reliability of a scale and therefore can often underestimate scale reliability (see Sijsma, 2009). The composite reliability coefficient is not limited by this underestimation property (Raykov, 1997). As can be seen in Table 1, the scales demonstrated acceptable-to-good levels of reliability, with all values above the generally accepted criterion of .70.

Descriptive statistics and factor correlations of the study variables were calculated using the items used in model testing, and results are presented in Table 1. On average, athletes reported moderately low levels of antisocial behavior and moral disengagement, and moderately high to very high levels of perceived value of toughness and task and ego orientations. Perceived value of toughness and ego orientation had a moderate positive correlation and were moderately related to moral disengagement. Moral disengagement had a very strong positive relationship with antisocial opponent and a moderately strong positive relationship with antisocial teammate behavior. Age and sport experience were not associated with antisocial behavior. Correlation coefficients of .10, .30, and .50 represent small, medium, and large effect sizes, respectively (Cohen, 1992).

### Structural Equation Modeling

The purposes of this study were to examine (a) whether ego and task orientations and perceived value of toughness predict antisocial behaviors toward opponents and teammates in male soccer players and (b) whether any effects are mediated by moral disengagement. These purposes were examined using SEM, and the approaches recommended by Anderson and Gerbing (1988); all SEM analyses were conducted using the EQS 6.1 statistical package with the robust least-squares estimator (Bentler & Wu, 2002). All variables measured on a 1–5 scale were treated as categorical during model specification (Flora & Curran, 2004).

**Table 1** Descriptive Statistics, Factor Correlations, and Scale Reliabilities (*N* = 294)

Variable	<i>M</i>	<i>SD</i>	Range	1	2	3	4	5	6	7
1. Antisocial opponent behavior	2.75	0.69	1.12–4.25	(.82)						
2. Antisocial teammate behavior	2.66	0.74	1.00–4.60	.69*	(.78)					
3. Moral disengagement	3.79	0.94	1.33–6.33	.69*	.37*	(.73)				
4. Perceived value of toughness	3.49	0.70	1.40–5.00	.36*	.24*	.41*	(.73)			
5. Ego orientation	4.05	0.77	1.00–5.00	.39*	.17*	.36*	.45*	(.85)		
6. Task orientation	4.40	0.51	2.33–5.00	.01	–.03	.06	.14	.67*	(.84)	
7. Years playing soccer	13.04	5.14	1.00–30.00	–.03	.02	–.14*	–.08	–.11	–.01	—
8. Age	21.39	4.01	16.00–36.00	–.05	.01	–.10	–.09	–.07	.07	.65**

*Note.* Composite reliability coefficients are presented on the diagonal. Possible scale ranges: 1–7 for moral disengagement, and 1–5 for all other scales. All values were calculated based on the items used in model testing. Correlations involving years playing soccer and age used subscale scores.

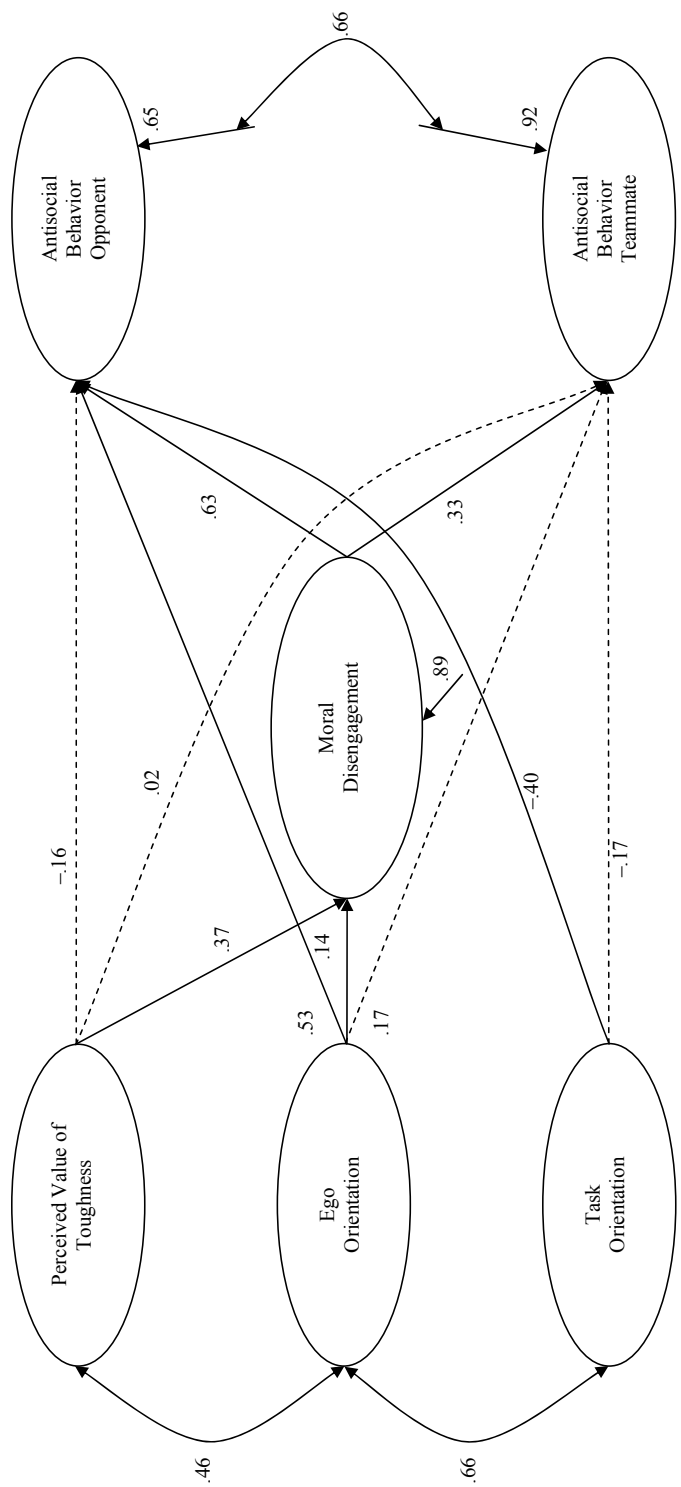
\**p* < .05, \*\**p* < .01.

It is common practice when utilizing SEM to provide fit indices as indicators of model fit. However, such practice has become a contentious issue in the SEM literature, with some experts suggesting they should not be used at all (Barrett, 2007), and others proposing that the inclusion of certain fit indices is warranted (Bentler, 2007). As there is no current consensus on this issue, we have provided fit indices for the interested reader. In accordance with the guidelines provided by Bentler (2007), the indicators used to assess model fit were as follows: the Satorra–Bentler chi-square ( $\chi^2$ ); the robust comparative fit index (CFI); the standardized root mean square residual (SRMR); and the robust root mean square error of approximation (RMSEA).

**Testing the Measurement Model.** The first step of the Anderson and Gerbing (1988) approach involves testing the measurement model, that is, the relationships of the observed items to their posited factors. The initial measurement model consisted of all items ( $N = 38$ ) measuring antisocial opponent ( $n = 8$ ) and teammate ( $n = 5$ ) behaviors, moral disengagement ( $n = 8$ ), perceived value of toughness ( $n = 5$ ), and ego ( $n = 6$ ) and task ( $n = 6$ ) orientations. Specification of this model resulted in a good fit,  $\chi^2(650) = 887.56$  ( $p < .05$ ); CFI = .969; RMSEA = .035; SRMR = .069. However, two moral disengagement items (it is okay to treat badly an opponent who behaves like an animal and players who are mistreated have usually done something to deserve it) and two ego orientation items (I beat other people and I outperform my opponents) were removed because they were partly responsible for the largest standardized residuals and/or had a low factor loading. This is regarded acceptable practice, as it retains the general structure of the model while utilizing the best available indicators (Hofmann, 1995). The revised model, consisting of 34 items as indicators of six latent variables fitted the data very well,  $\chi^2(512) = 566.67$  ( $p < .05$ ); CFI = .991; RMSEA = .019; SRMR = .061. Factor loadings ranged from .39 to .83 ( $M = .65$ ).

**Testing the Structural Model.** The second step recommended by Anderson and Gerbing (1988) is to test the structural model. Thus, a model was specified in which perceived value of toughness and ego orientation predicted antisocial behavior toward opponents and teammates directly as well as through moral disengagement, and task orientation predicted the two types of behavior directly (see Figure 1). This model (see Figure 2) fitted the data very well,  $\chi^2(514) = 589.42$  ( $p < .05$ ); CFI = .988; RMSEA = .022; SRMR = .063, and explained 58% and 16% of the variance in antisocial behavior toward opponents and teammates, respectively. Perceived value of toughness and ego orientation had moderate and weak positive effects, respectively, on moral disengagement; task and ego orientation had moderate negative and strong positive effects, respectively, on antisocial opponent behaviors; and moral disengagement had very strong and moderate positive effects on antisocial opponent and teammate behaviors, respectively. All other effects were nonsignificant.

As stated above, the second purpose of the study was to examine whether moral disengagement mediated any predictor effects on behaviors. To investigate the presence and magnitude of mediation, when specifying the model, we requested the decomposition of model effects into direct, indirect, and total effects (Bollen, 1987). Direct effects are the effects of the predictor variables (i.e., ego goal orientation and perceived value of toughness) on the outcome variables (i.e.,



**Figure 2** — Final structural model. Solid lines indicate significant relationships ( $p < .05$ ), and dotted lines indicate nonsignificant relationships ( $p > .05$ ).

antisocial behavior toward teammates and opponents) that occur independently of the mediator (i.e., moral disengagement); indirect effects represent the mediated effect (i.e., through moral disengagement); and total effects are the sum of these two effects. The percentage of the total effect accounted for by the indirect effect reflects the magnitude of mediation. The total, direct, and indirect effects of the perceived value of toughness were .15 ( $p > .05$ ), .03 ( $p > .05$ ), and .12 ( $p < .05$ ), respectively, on antisocial teammate behavior, and .08 ( $p > .05$ ),  $-.15$  ( $p > .05$ ), and .23 ( $p < .05$ ), respectively, on antisocial opponent behavior. Thus, the percentage of the total effect mediated by moral disengagement was 80% for antisocial teammate and 61% for antisocial opponent behaviors. The total, direct, and indirect effects of ego orientation were .22 ( $p > .05$ ), .17 ( $p > .05$ ), and .05 ( $p < .05$ ) on antisocial teammate behavior and .62 ( $p < .05$ ), .53 ( $p < .05$ ), and .09 ( $p < .05$ ) on antisocial opponent behavior. The percentage of the total effect of ego orientation mediated by moral disengagement was 23% for antisocial teammate and 15% for antisocial opponent behaviors.

To test the significance of the mediated effects, we used the distribution of products test (MacKinnon, Lockwood, & Hoffman, 1998). This test has been identified as an effective test of mediation that retains more statistical power and maintains an accurate Type I error rate in comparison with other mediation tests (see MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). The test involves converting the two parameter estimates that form the mediated relationship (i.e., the effect of the predictor variable on the mediator and the effect of the mediator on the outcome variable) into  $z$ -scores and comparing the product of these two  $z$ -scores against values in a product of two random, normal variables table (e.g., Craig, 1936) to determine statistical significance. If the product of the two  $z$ -scores is significant, then the mediated effect is statistically significant. This test indicated that the mediated effects of perceived value of toughness on antisocial teammate ( $z_{\alpha}z_{\beta} = 21.99, p < .01$ ) and opponent ( $z_{\alpha}z_{\beta} = 31.40, p < .01$ ), and ego goal orientation on antisocial teammate ( $z_{\alpha}z_{\beta} = 11.97, p < .01$ ) and opponent ( $z_{\alpha}z_{\beta} = 17.09, p < .01$ ) behavior were significant. Overall, the results suggest that moral disengagement fully mediated the effects of perceived value of toughness and partially mediated the effects of ego orientation on the two types of antisocial behavior.

## Discussion

Antisocial sport behaviors can have detrimental effects on the quality of the sport experience for the recipients of these behaviors. Although several studies have examined antisocial behaviors in sport, researchers have focused almost exclusively on behaviors aimed at opponents (e.g., Kavussanu, 2006; Sage & Kavussanu, 2007; Sage et al., 2006). Recent research has shown that antisocial sport behaviors also occur toward teammates (Kavussanu & Boardley, 2009). The current study examined predictors of antisocial behaviors toward teammates and opponents and whether moral disengagement mediated any identified effects.

Ego and task orientation had direct positive and negative effects, respectively, on antisocial behavior directed toward opponents. Thus, players who felt successful when demonstrating superiority over others were more likely to engage in behaviors such as trying to injure and physically intimidating opponents, whereas

those focused on achieving personal improvement, overcoming difficulties, and performing to the best of their ability were less likely to commit such acts. These findings are consistent with past research that has found positive and negative links, respectively, between ego and task orientation and antisocial behavior (Kavussanu, 2006; Sage & Kavussanu, 2007) as well as attitudes toward unsportsmanlike play (Duda et al., 1991; Stuntz & Weiss, 2003). Taken together with past research, our findings suggest that reducing ego and promoting task orientation in players may be a worthwhile approach for coaches who would like to reduce the frequency with which their players engage in antisocial behavior toward opponents.

Contrary to the stated hypothesis, task orientation had no effect on antisocial teammate behavior. Thus, if athletes who were high in task orientation were more likely to cooperate with peers, this did not lead to a reduced frequency of antisocial acts toward teammates. As positive and negative social behaviors reflect separate dimensions of morality (see Bandura, 1999), it is possible that greater cooperation among peers as a result of higher task orientation may result in more frequent pro-social behaviors toward teammates, but not reduce the number of antisocial acts. The differential effects seen in the current study for the prediction of antisocial opponent versus teammate behaviors reinforce the need to consider both types of behavior when investigating predictors of antisocial behavior in sport.

The moderately strong positive relationship between task and ego goal orientation was concordant with the stated hypothesis. However, this relationship is in contrast to the orthogonal relationship predicted by achievement goal theory (Nicholls, 1989) and found in a number of sport studies. For example, among university students participating in physical activity classes, children attending summer sports camps, high school students, and college team-sport athletes, the two goal orientations have been only weakly or not at all related (e.g., Duda & Nicholls, 1992; Kavussanu & Harnisch, 2000; Kavussanu & Ntoumanis, 2003; Roberts et al., 1998). In contrast, other studies investigating soccer players have reported moderate-to-strong positive correlations between the two goal orientations (Kavussanu, 2006; Sage & Kavussanu, 2007, 2008). Thus, a number of studies have now shown that the two goal orientations are not always orthogonal.

Moral disengagement mediated effects of ego orientation on antisocial behaviors. These findings suggest that higher levels of moral disengagement in ego-oriented athletes may result in more frequent antisocial conduct. Their higher levels of moral disengagement may mean that these athletes do not experience as much negative emotion when engaging in antisocial behaviors and are therefore more likely to repeat these behaviors. Nicholls (1989) proposed that achievement goals affect people's views about what is acceptable behavior in achievement contexts and individuals who are high in ego orientation are less likely to be concerned with justice and fairness. The present findings support this contention and suggest that players high in ego orientation may have different thought patterns with respect to moral conduct when compared with their low-ego-oriented counterparts. How people think can have important implications for morally relevant behavior (Bandura, 1991). Our findings suggest that ego-oriented soccer players may morally disengage, which in turn leads them to engage in antisocial acts.

Consistent with our hypotheses, moral disengagement also mediated the positive effects of perceived value of toughness on antisocial teammate and opponent behaviors. This suggests that players who perceive that their teammates respect

those who are seen as being tough may have moral cognitions that are different from those who do not perceive this; these cognitions, in turn are linked to more frequent antisocial behavior toward teammates and opponents. This finding is consistent with past research that found that perceived importance of social status in prisoners was positively related to moral disengagement, which was associated with more frequent bullying (South & Wood, 2006).

## Study Limitations and Future Research Directions

This study revealed a number of interesting findings. However, there are some limitations that should be addressed in future research. First, the data were cross-sectional. We tested hypothesized causal relationships and showed that these relationships were consistent with the data, but due to the cross-sectional nature of the data we cannot make firm claims regarding the direction of causality. Indeed, South and Wood (2006) examined moral disengagement as a *predictor* of the importance of social status, which reflects a direction of causality that is reverse to that tested here. Future research should use quasi-experimental designs to test the direction of causality in the identified relationships. Second, we used male soccer players; thus, our findings can only be generalized to this population. Researchers should investigate whether the identified relationships hold in other sport participants. Other areas for future research include examining the role of emotions and exploring whether antisocial teammate behaviors influence team cohesion and enjoyment.

## Conclusion

In conclusion, the current findings enhance our knowledge of the variables that predict antisocial behavior in male soccer players and provide further evidence for the negative implications that moral disengagement may have in sport. That task and ego orientation directly predicted antisocial opponent behavior in opposing directions, and ego orientation and perceived value of toughness had positive effects on both types of antisocial behavior mediated by moral disengagement, are key findings that may have important implications for inter- and intrateam antisocial behavior. In fact, goal orientations, moral disengagement, and perceived value of toughness may be variables worth considering by sport practitioners who are aiming to reduce antisocial behavior toward opponents and teammates in male soccer players.

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## Appendix: Items Used in Final Structural Model

**Antisocial Behavior Toward Opponents:** Deliberately fouled an opponent; tried to injure an opponent; tried to wind up an opponent; physically intimidated an opponent; intentionally distracted an opponent; intentionally broke the rules of the game; retaliated after a bad foul; criticized an opponent.

**Antisocial Behavior Toward Teammates:** Argued with a teammate; verbally abused a teammate; criticized a teammate; swore at a teammate; showed frustration at a teammate's poor play.

**Perceived Value of Toughness:** If necessary I will use physical force to gain my teammates' respect; it is important to me that my teammates think I'm not afraid of anything; players on this team respect players who dominate opponents; one of the most important things in this team is being respected by your teammates; teammates look up to you if you can sort out opponents who are disliked.

**Ego Orientation:** I am clearly superior; I am the best; I accomplish something others can't do; I show other people I am the best.

**Task Orientation:** I show clear personal improvement; I reach a goal; I overcome difficulties; I master something I couldn't do before; I perform to the best of my ability; I work hard.

**Moral Disengagement:** Bending the rules is a way of evening things up; shouting at an opponent is okay as long as it does not end in violent conduct; it is okay for players to lie to officials if it helps their team; it is unfair to blame players who only play a small part in unsportsmanlike tactics used by their team; a player should not be blamed for injuring an opponent if the coach reinforces such behavior; insults among players do not really hurt anyone.

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